

- 10 The frequency table shows information about the number of cookies made by each of the 21 people in a cookery class.

Number of cookies made	Frequency
10	1
11	7
12	2
13	5
14	4
15	2

- (a) Write down the mode of the number of cookies made.

.....
(1)

- (b) Find the median number of cookies made.

.....
(2)

- (c) Find the total number of cookies made by the 21 people in the cookery class.

.....
(2)

(Total for Question 10 is 5 marks)



11 (a) Work out the value of $(4 + 3 + 6)^2$

.....
(1)

$$64 = 4^n$$

(b) Write down the value of n

$n =$
(1)

(c) Work out the value of $\frac{\sqrt{9.3 + 2.8^3}}{3.2 \times 1.2}$

Write down all the figures on your calculator display.

.....
(2)

(Total for Question 11 is 4 marks)

12 Last season, Alisha and Jaya scored goals for their team in the ratio 4 : 7
Jaya scored 39 more goals than Alisha.

Work out the number of goals Alisha scored.

.....
(Total for Question 12 is 3 marks)



- 13 There are 380 students in a Sixth Form.
The students are either in the Upper Sixth or in the Lower Sixth.

The number of students in the Upper Sixth is 20 fewer than the number of students in the Lower Sixth.

$\frac{2}{5}$ of the Upper Sixth students study mathematics.

32% of the Lower Sixth students study mathematics.

Work out the total number of students in the Sixth Form who study mathematics.

.....
(Total for Question 13 is 4 marks)



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14 The diagram shows a solid prism.

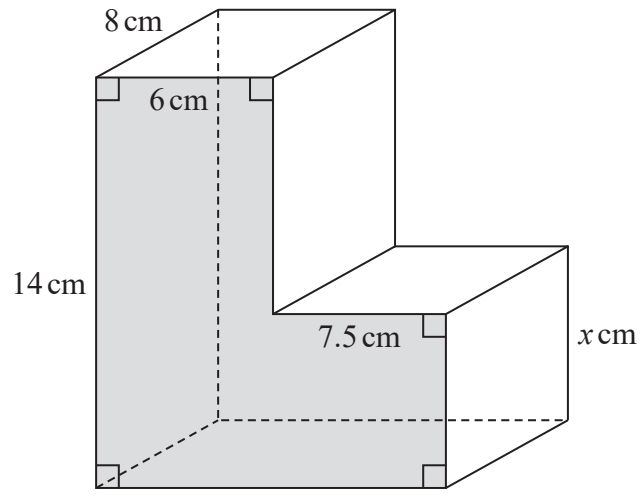


Diagram NOT accurately drawn

The cross section of the prism is shown shaded.

The volume of the prism is 924 cm^3

Work out the value of x

$x = \dots\dots\dots$

(Total for Question 14 is 4 marks)



15 The diagram shows two parallel lines AB and DEF

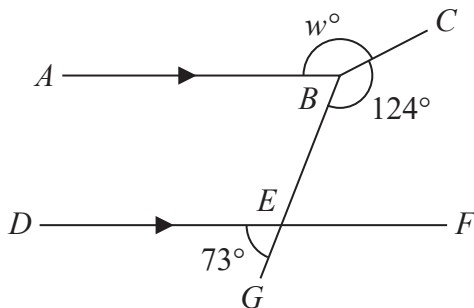


Diagram **NOT** accurately drawn

BEG is a straight line.

$$\text{angle } DEG = 73^\circ \quad \text{angle } EBC = 124^\circ \quad \text{angle } ABC = w^\circ$$

Work out the value of w

Give reasons for each stage of your working.

$$w = \dots\dots\dots$$

(Total for Question 15 is 4 marks)

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16 Show that $3\frac{5}{7} \div 1\frac{5}{8} = 2\frac{2}{7}$

(Total for Question 16 is 3 marks)

17 Change a speed of 90 kilometres per hour to a speed in metres per second.
Show your working clearly.

..... m/s

(Total for Question 17 is 3 marks)



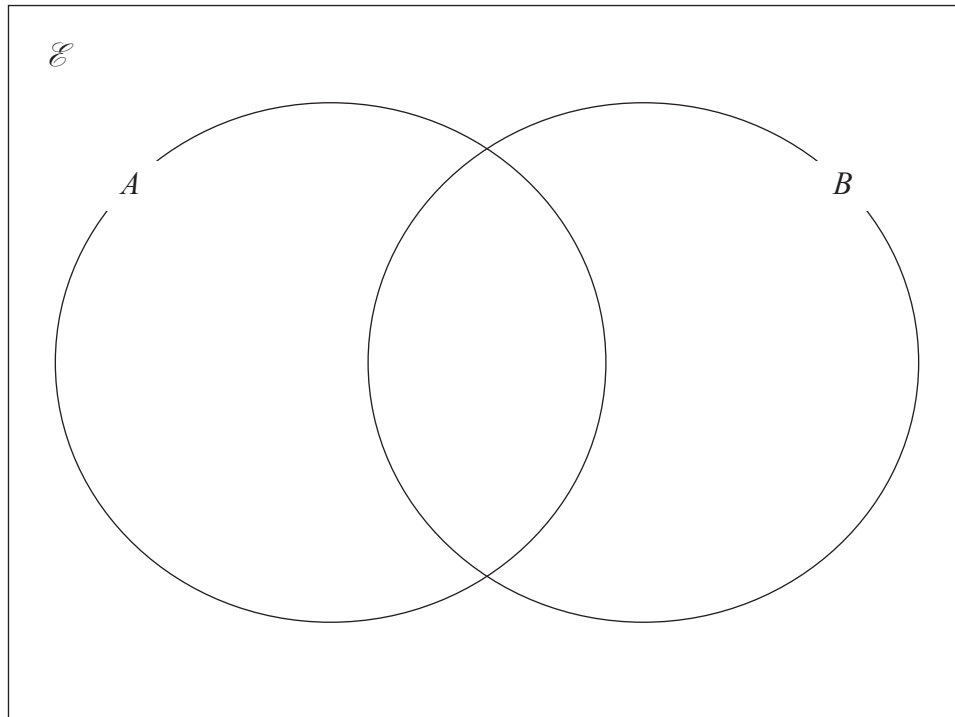
18 $\mathcal{E} = \{11, 12, 13, 14, 15, 16, 17, 18, 19, 20\}$

$A = \{\text{even numbers}\}$

$A \cap B = \{12, 16, 20\}$

$(A \cup B)' = \{17, 19\}$

Complete the Venn diagram for the sets \mathcal{E} , A and B



(Total for Question 18 is 3 marks)

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